Android Tablet Test Platform:

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- Android v2.2
- 7″ 800x480 WVGA
- Touch-screen GUI
- 3 USB ports, Wi-Fi
- Web Browser
- Test DS0 to Ethernet
- Rugged Tablet!

GUISYS ...meets

State-of-the-Art Android Tablet-PC based portable Test-system provides a peerless User Experience with exceptional performance.

Supports Android app's: Web Browser, Maps, Streamed Video & Audio, Contacts & Notes, ...and more!

Test Platform Features

ANDROID

Full Tablet-PC POWER

- Bright 7" WVGA Touch-screen
- Landscape & Portrait Modes
- 10/100 LAN port + Wi-Fi support
- 2 USB Host ports & USB OTG
- SD expansion Card slot
- Browse the Web w/GOOGLE
- Supports Multi-media playback
- Supports core Android App's;
  - Google Maps
  - Notes & Contacts
  - Edit & View PDF's
  - Power Point, EXCEL,WORD
  - Training Video's on Test Set!
- Transfer Results, Logs & Test files
- Update from anywhere!
- Plug & Stay– **no modules to lose!**
- Protective Rubber Bumpers/Handle
- AC & Long-Life Lithium DC Power

Flexible Performance

- State-of-the-Art
- Intuitive, Easy-to-Use Android GUI
- Test any single or **all** Services
  - *Fast Ethernet (10/100)*
  - *Gigabit Ethernet (1000)*
  - *Dual Gigabit Ethernet*
  - *10Gigabit Ethernet*
  - *DS3*
  - *DS1, Dual-DS1*
  - *DS0 Data Services*
  - *DS0-PCM Voice Services*
  - *E1, Dual-E1*
  - *2-wire Signaling-TIMS*
  - *4-wire Wideband TIMS*
  - *PRI-ISDN NT & TE*
  - *4-wire DDS , Frame-Relay*
  - *VT100 Emulation*
  - *Configure your System! As YOU need it!*
- Local & Remote Control
  - *Integral touch screen GUI*
  - *Laptop, PC, PDA*
  - *10/100 Ethernet*
  - *Wi-Fi Wireless LAN*
- Interactive Help & Tips
- Rugged Handheld Tablet

Android Tablet-PC Platform GENERAL

AC Volts: 100-120Vac 50-60Hz
Operating: -10-55C, 0-93% RH n.c.
Storage: -20 to 70 deg C
Battery: single or dual Li-ION Pack up to 8hrs continuous.
Dimensions: 10.0 x 6.5 x 2.2 in. 2-3 lbs (per equippage)

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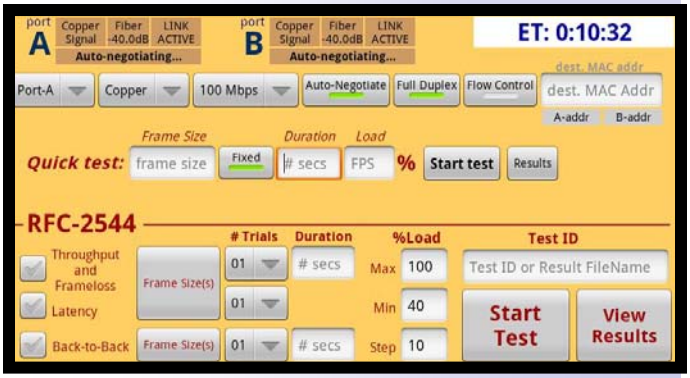
Gigabit Ethernet Features

Ethernet Testing

- Supports WAN, Metro & LAN
- Wireless Backhaul
- Single or dual 1Gig Ethernet
- 10Gig Ethernet only (2Q13)
- Integrated 1G & 10G
- One or two Optical SFP (100M &1G)
- One or two Optical SFP+ (1G and/or 10G)
- Dual RJ45 Copper Port (10/100/1G)
- Supports;
  - Fast Ethernet 10/100
  - Gigabit Ethernet 1000
  - 10 Gigabit Ethernet
- Optical Power Measurement
- Displays SFP info. & status
- Easy scroll results & status
- RFC-2544 tests
  - Throughput
  - Latency
  - Back-to-Back
  - Graph & PDF Generation
  - Easy to read reports
- Optional IP: Ping & BERT/PRBS
- Ethernet Loopback Port-B
- Port-B Monitor and Thu Mode
- Optional VLAN & MPLS Support
- Quick Packet Test
- GUISYS Plug & Stay technology
- Legacy DS1/DS3 –1G/10G backhaul
- Easy Setup - all in one screen!

Flexible Tablet-PC Platform

- State-of-the-Art
- It's a Test Set AND a Tablet!
- Test any or all your Services
  - *Fast Ethernet (10/100)*
  - *Gigabit Ethernet (1000)*
  - *Dual Gigabit Ethernet*
  - *10Gigabit Ethernet*
  - *DS3*
  - *DS1, Dual-DS1*
  - *DS0 Data Services*
  - *DS0-PCM Voice Services*
  - *2-wire Signaling-TIMS*
  - *4-wire Wideband TIMS*
  - *PRI-ISDN*
  - *4-wire DDS , Frame-Relay*
  - *Timing Analysis*
  - ***Configure your System! As YOU need it!***
- Interactive Help & Tips
- Rugged & Handheld
- Easy & Intuitive to Use



DS3-DS1 Features

Integrated BRICK

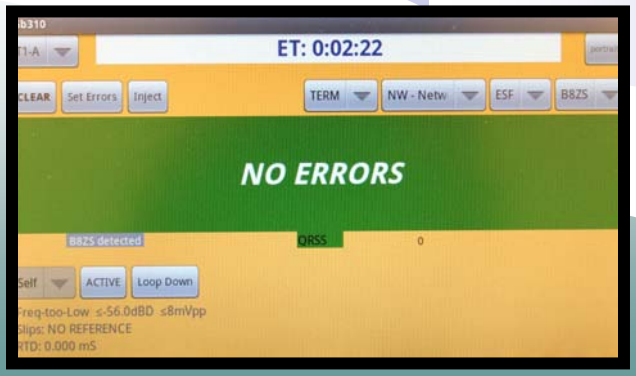
- Simple Intuitive Use
- State-of-the-Art
- Test Multiple Services
  - *DS3 services testing*
  - *DS1 or Dual-DS1 testing*
  - *Ethernet 10/100/1000*
  - *DS0 E911 Data Activity*
  - *PRI-ISDN*
  - *4-wire DDS*
  - *Frame-Relay*
  - *Make your own Combo!*
- Multiple User Interface
  - *Graphical User Interface*
  - *Built-in GUI (PDA-style)*
  - *PC's and Laptop's*
  - *Android Based*
- Training Video's on Tablet
- LAN and/or Wi-Fi
- Built-in User Manual
- Automatic Test modes
- Long-Life Li-ION Battery
- Rugged & Handheld
- Full Featured DS1 & DS3

Comprehensive DS3

- Auto, M13, C-bit, UnF
- B3ZS Line Coding
- Monitor & TERM modes
- Internal & Loop Timing
- ALARM Status & History
- Qualify DS3 Signal
- Auto-Frame to T3 circuit
- DS3 Frequency & Level
- DS3 Loopbacks:
  - *NIU Loopbacks*
  - *FEAC Loopbacks*
  - *COT, RT & Repeater*
- CSU/NIU Emulation Mode
- DS3 Thru Mode
- DS2 Alarms & Status
- Comprehensive BERTs
- Error Insertion & Analysis
- Built-in HELP & Tips Guide
- DS1 Drop & Insert Port
- Then Drop any DS0
  ...to check E911 data.

Dual-Independent T1's

- Test two (2) T1's at once!
- Auto, ESF, D4, Unframed
- B8ZS/AMI Line Coding
- Monitor, TERM & Bridged
- Internal & Loop Timing
- ALARM Status & History
- DS1 Frequency & Level
- DS1 Clocking & Slips
- Auto-Config to T1 circuit
- Auto BERT Detect
- DS1 Loopbacks:
  - *InBand & FDL Loopbacks*
  - *HDSL Loopbacks*
- CSU/NIU Emulation Mode
- 24-channel DS0 Signaling
- Comprehensive BERTs
- Error Insertion & Analysis
- Built-in HELP & Tips Guide
- DS0 Voice & Data
- DS0 Channel Activity



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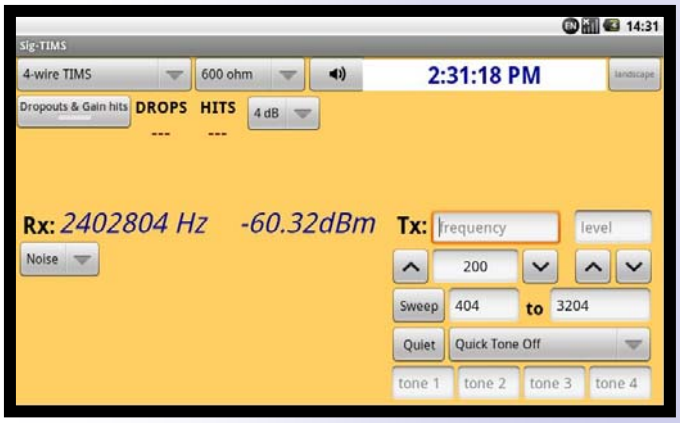
Signaling-TIMS/DS0 Features & Specs

- Simple Intuitive Interface
  with one-touch operation!
- State-of-the-Art Technology
- Upgraded HP4935A replacement!
- Voiceband: 600, 900, 1200 ohm
- Wideband: 100 and 135 ohm
- Bridge Mode
- CO Modes with internal -48V_{DC} bat,
  provides Dial-Tone and RINGING!
- PBX /Station Emulation Modes
- Loop-Start and Ground-Start modes
- DID-immediate and DID-wink modes
- Supports E911 services
- Measures Dropout & Gain Hits
- Level Zero Measurement
- Test Analog Services
- Impulse & S/N Measurements

- Real-time Signaling State Display!
- Monitors Line Voltages and Current
- Noise tests with C-msg, D, notch filters
- DVM—Voltage and Current Display
- User defined frequency buttons
- Built-in User Manual with HELP & Tips
- Auto Frequency Sweep to 2MHz!
- Large Display to view Results
- Internal Speaker and Butt-set Jack
- Rugged Handheld and Rack mount
- Integrate DS3/DS1/PRI-ISDN/DDS,
  Ethernet and Datacomm (DCE/DTE)
- Plug & Stay test modules, All one test set!
- Portrait and Landscape Modes



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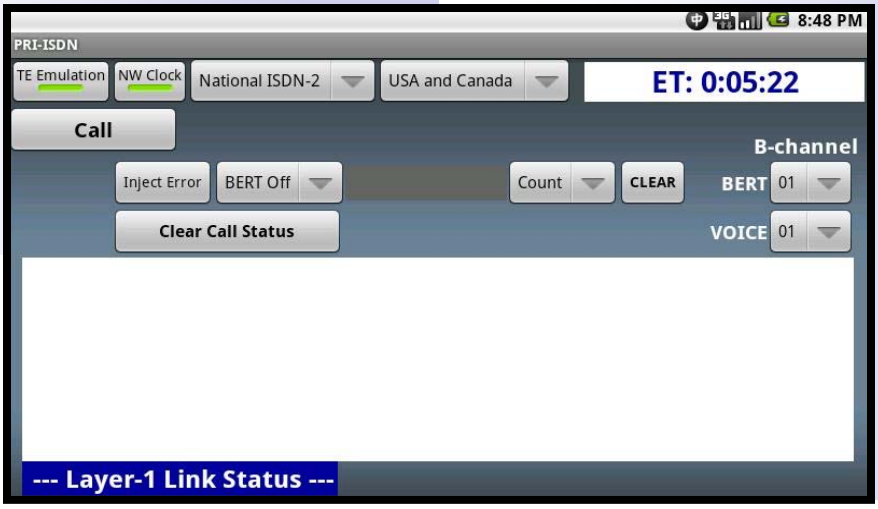
PRI-ISDN Features

- Simple Intuitive Interface
- State-of-the-Art Technology
- Remote Control
- Interactive User guide
- Easy Calls Setup
- CO Switch Mode (NT)
- PBX Station Mode (TE)
- Integral SRAM
  - *Test Logs - Circuit-ID*
  - *Transfer to PC, Store & Print*
  - *Upgrades & Enhancements*
- Extended Life Lithium Battery
- GUISYS Plug & Stay technology
- BRICK: Rugged & Handheld
- Tiny 4"x9"x2.6"

- TE (PBX) & NT (CO) Modes
- USA, Euro & Asian Switches
- Internal & Loop Timing
- Voice, Data & Audio Calls
- Select any B-Channel
- Up to 23 Simultaneous Calls
- Quick-TAP easy-to-read ASCII Q.931 Protocol Decodes
- Comprehensive BERTs
- w/TIMS: Butt-set/Phone Jack
- Error Insertion & Analysis
- Isolate Network & CPE
- Built-in HELP & Tips Guide
- Optional E1-Euro PRI-ISDN



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CO Timing Analyzer

Automated TSG & Timing analysis System...

Three systems in One: TSG Breakout box, O'Scope & T1 test set

Simplify and Automate TSG output verification tests. Tests TIP & RING independently, verifies Frequency, Voltages and Phase.

Auto 10-channel scan test, Auto fault detection: No Clock, No TIP, No RING, No 8k (BPV's), CC or T1 signal. Test & Verify Tip-to-Ring and Tip-to-Reference.

Timing is Everything!!! Make sure your network is timed properly.

RITS Timing Features

- CC Signal Measurements
  - *Frequency (CC & Auto-T1)*
  - *Phase 0-360deg & uSec*
  - *TIP Vpp, +Vpk and –Vpk*
  - *RING Vpp, +Vpk and –Vpk*
- Auto-FAULT Detection:
  - *No Clock Detected*
  - *Missing or Open TIP*
  - *Missing or Open RING*
  - *T1 on TIP*
  - *T1 on RING*
  - *T1 on Tip & Ring*
  - *No 8k (BPV's) on TIP*
  - *No 8k (BPV's) on RING*
  - *No REF detected*
  - *Missing or Open REF*
  - *No 8k (BPV's) on REF*
- Composite Clock & T1
- Tip-Ring & Tip-Reference
- TERM & Bridged Modes
- Auto OUT-of-RANGE:
  - *Frequency Out of Range*
  - *Voltage Out of Range*
  - *Phase Out of Range*
- Auto10-Channel Scan
- Built-in User Guide
- Optional Tone Tracer
  - *Warble Tone on Live Circuits!*
- Optional DC Voltmeter

RITS CORPORATION

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4-wire DDS Features & Specs

- Simple Intuitive Interface
  with one-touch operation!
- State-of-the-Art Technology

- CSU/DSU Emulation Mode
- Internal or Network Clocking
- 56k Primary & Secondary Modes
- 64k Clear Channel Mode
- Optional Switched-56k Mode
- Real-time Received Byte display
- Monitors Received Signal Level
- Capture & display FrameRelay DLCI's

- Interactive User Manual
- Built-in HELP & Tips Guide
- Extended Temperature Li-ION Battery
- BRICK: Rugged & Handheld
- Optional 4-wire Wideband TIMS
- Optional Wi-Fi or 10/100 Ethernet
- Integrate DS0/DS1/PRI-ISDN and DS3 test modules into one test BRICK for complete Digital services testing!

DDS 4-wire Local Loop Receiver

Interface: 4-wire DDS 8-pin modular RJ48
AT&T Pub 62310 4-wire 135Ω Impedance
Cable Gauge: 19 to 26 awg.
Sensitivity: -48dB Jitter: ±5% max.
Rejection: AT&T Pub 62310 C-message filter
Level: 0 to –50 ±1dBm
Primary Channel: AT&T Pub 62310
Secondary Channel: TR-NPL-000157
Loop Rates: 56k, 72k, (64k) bps
DDS Codes: Real-time display Bits, Hex and decoded
BERT: 2047, 511, All-1's, All-0's, Alt 1:0
Loopbacks: Alternating and Streamed DSU, CCITT V.54
Sealing Current detection with CSU loopback activation

DDS 4-wire Local Loop Transmitter

Interface: 4-wire DDS 8-pin modular RJ48
AT&T Pub 62310 135Ω Impedance
Cable Gauge: 19 to 26 awg.
Signal Amplitude: 3.32Vmax.
Rejection: AT&T Pub 62310 C-message filter
Level: 0 to –50 ±1dBm
Primary Channel: AT&T Pub 62310
Secondary Channel: TR-NPL-000157
Loop Rates: 56k, 72k, (64k) bps
Primary Codes: DMI, CMI, OOS, OOF
Secondary Codes: DMI, CMI, UMC, AZC, ASC, MOS
BERT: 2047, 511, All-1's, All-0's, Alt 1:0
Loopbacks: CCITT V.54 and Alternating DSU Loopbacks

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Datacomm Features

- State-of-the-Art Technology
  - Simple Intuitive Interface
  - Built-in GUI or Optional PC Remote Control
- Features & Capabilities;
  - DCE & DTE Drop, Emulation & Test
  - Auto & Manual Interface Selection
  - SYNC & ASYNC modes
  - BERT, PRBS, QRW testing
  - Comprehensive Error Analysis
  - Local and Self Loopbacks
  - Round-Trip Delay measurements
- Applications;
  - Telecommunication Equipment
  - CSU and DSU's
  - Network Switches
  - WAN Access Equipment
  - VoIP-PBX Gateways
  - Data Communication Networks
  - Data Routers
  - DCE—DTE Monitoring
  - DCE/DTE to LAN/WAN transport
  - DCE/DTE port translation/conversion
- 10/100 Ethernet Port
- Built-in User Manual with HELP & Tips
- Stand-alone Test set or Integrate with DS3, DS1, E1, PRI-ISDN, DDS, DS0 or Signaling-TIMS test modules into one test BRICK for comprehensive testing.

MultiPort DataComm Interface

Modes: Term, Monitor (Thru)
Clock: Internal, External and DCE Dropped
Protocol: SYNC, ASYNC
Maximum supported Bit Rate:

RS-232, V.28:	250kbps
RS-423, V.10:	250kbps
RS-422, V.11	52Mbps
RS-422, V.11	10Mbps (handshake signals)
V.35	40Mhz

Asynchronous word formats:
data bits: 7, 8
stop bits: 1, 2
parity: None, Even, Odd
Patterns: 2047, 511, QRSS, 3n24, 1:7, 2in8, All-1's, All-0's, Alt 1:1, DALY, 2^{23}-1, 2^{20}-1, 2^{15}-1, 1:16, etc.
Logical Error Injection
Round-Trip Delay measurements
Error Analysis: BIT, BER, ES, EFS, %EFS, SES, %SES.
Elapsed Time, Continuous and Interval testing
Signal Frequency Measurement and display: 0.1%
Loopbacks: Local and Self-loop
Standards: NET1, NET2 and TBR2 specifications

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Frame-Relay Test Features

- Simple Intuitive Interface
  with one-touch operation!
- State-of-the-Art Technology

- Monitors Received Signal Level
- Verify & Test DS1 or DDS facility
- CSU/DSU/NIU Emulation Mode
- Internal or Network Clocking
- Monitor and Intrusive Modes
- Supports both 56k & 64k
- Real-time Received Byte display
- Capture & display DLCI's
- Transmit Test Frame(s)

- Interactive User Manual
- Built-in HELP & Tips Guide
- Extended Temperature Li-ION Battery
- Integral GUI, PC, Laptop, PDA options
- Optional Wi-Fi or 10/100 Ethernet
- Integrate DS3/DS1/DS0/PRI-ISDN and TIMS test modules into one test BRICK for complete Copper services testing!

- Frame-Relay Packet Processor
- Real-time Received Status
  - *Active Frame Receive Indicator*
  - *DLCI Capture (decimal & hex)*
  - *Abort Frames*
  - *FCS Errored Frames*
  - *Byte & Bit level display*
  - *Congestion Notifications: FECN, BECN*
  - *Delete Eligibility Frame (DE)*
  - *Message content in ASCII & Hex*

- Transmit Frame/Packet(s)
  - *Programmable Tx DLCI Address*
  - *Transmit Single Test Packet*
  - *Transmit Continuous Test Packets*
  - *Insert Congestion or Delete Flag(s)*

- Touch-sensitive HELP & Tips
- Dual Li-ION system: 8+hours
- Rugged & Hand-held

CORPORATION

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E1 Test Features

Integrated BRICK

- Simple Intuitive Interface
  with one-touch operation!
- State-of-the-Art Technology
- Optional *T1 and E1 — in one unit!*
- Fractional-E1, E0 Monitor, Signaling-bits
- ANSI and ITU BERT patterns
- Drop, Insert & Bypass Testing
- Upgrade to other Services
  - *DS3 Testing*
  - *Dual-E1 testing*
  - *Single or Dual-T1 testing*
  - *E0 and/or DS0 Data Services*
  - *2-wire Signaling-TIMS*
  - *4-wire Voice band TIMS*
  - *4-wire Wideband TIMS*
  - *PRI-ISDN (Europe, Asia & North America)*
  - *4-wire 56k & 64k DDS*
  - *E0/DS0, DDS Frame-Relay*
  - *VT100 Emulation*
  - *Make your own System!*
- Optional Remote Access & Control via
  - *10/100 Ethernet and/or Wi-Fi port*
  - *PC, Laptop or PDA*
- Interactive Help Tips & User guide
- Rugged & Handheld

E1 Receiver

Modes: Monitor, Term, Bridged
Line Code: HDB3, AMI
Clock: 2.048MHz ±300ppm
Impedance: 120Ω and 75Ω nominal, Bridged > 1KΩ
Framing: PCM30, PCM31, PCM30+CRC4, PCM31+CRC4 and UnFramed

Sensitivity: MON: -15 to –32dB res., TERM/BRG: +4 to –40dB
Freq Res. & Accuracy: 0.1Hz, ±7ppm ±1.472Hz
Level Res. & Accuracy: 0 to-40dBDSX, -1.0 to –40dB ±1.25dB
Line Events:LOS,OOF,AIS, YEL (RAI), UAS, CRC, BPV, F-bits, E-bits
BERT Patterns ANSI and ITU (inv); Auto, QRSS, 3n24, 1:7, All1/0, Alt, DALY, 2^{15}-1, 2047, 1:16

Local Loopbacks: Network, Local to NW, Self-loop

E1 Transmitter

Modes: Term, Off in Monitor and Bridged
Line Code: HDB3, AMI
Clock: 2.048MHz ±10ppm
Impedance: 120Ω and 75Ω nominal
Framing: PCM30, PCM31, PCM30+CRC4, PCM31+CRC4 and UnFramed

Error Inject: Logical, Auto E-bit and BPV
Auto ALARM Injection: Auto-AIS, Auto-RAI and off

BERT Patterns ANSI and ITU (inv); Auto, QRSS, 3n24, 1:7, All1/0, Alt, DALY, 2^{15}-1, 2047, 1:16
Local Loopbacks: Network, Local to NW, Self-loop

E1 Standards: ITU-T G.703, G.704, G.706
T1 Standards: ANSI T1.403, AT&T Pub.62411

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